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ABSTRACT

The Comprehensive Competencies Program (CCP) is intended for use in delivering individualized, competency-based instruction in such diverse settings as community-based organizations, schools, corrections facilities, and job training programs. The learning system covers academic competencies ranging from elementary reading and arithmetic through high school and introductory college-level science, mathematics, humanities, social studies, and writing. It also addresses such functional competencies as job-getting and job-holding skills, consumer skills, citizenship, and health and community participation. CCP is based on a hierarchical framework of competency objectives organized into academic and functional components and includes 750 mastery tests to diagnose learner needs and track competency attainment. The program also features an information system that gathers all the information needed for individual education planning and tracking, management of instructional activities, and evaluation, as well as five computer systems to automate test scoring, teaching, record keeping, reporting, managing, and computer networking. The CCP users network links practitioners through quarterly user bulletins, surveys, and updates. CCP has been used effectively in diverse institutions ranging from adult basic education institutions to settings that can be described as high-tech one-room schoolhouses. (Thirty-three tables describing the outcomes and effectiveness of CCP are appended.) (MN)

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COMPREHENSIVE COMPETENCIES PROGRAM

The Comprehensive Competencies Program:
A Summary

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THE COMPREHENSIVE COMPETENCIES PROGRAM:

A SUMMARY

Robert Taggart

July 1986

A Tool To Address The Basic Skills Crisis

One of the most critical challenges facing our nation is to increase the basic skills of the American work force and citizenry by improving the quality, quantity and targeting of basic skills instruction in classrooms, communities and workplaces. An important mechanism for achieving this mission is the Comprehensive Competencies Program (CCP), developed by the Remediation and Training Institute with Ford Foundation support in 1983, prototyped, tested and finetuned in 1984, packaged for widespread dissemination in 1985, and now in use in community-based organizations, schools, corrections facilities and job training programs throughout the nation.

The CCP integrates the most successful educational approaches and materials developed over the last several decades into a system which can be implemented and operated cost-effectively in diverse settings to deliver individualized, competency-based instruction using state-of-the-art technologies. The learning system covers academic competencies--ranging from elementary reading and arithmetic, through high school and introductory

college-level science, mathematics, humanities, social studies and writing, as well as functional competencies determined necessary for success in the family, society and economy-- including job getting and holding, consumer skills, citizenship, health and community participation.

The CCP is based on a hierarchical framework of competency objectives organized into Academic and Functional Components. There are Basic, Intermediate and Advanced Tiers in both components, each spanning four Levels of difficulty in the Subject Strands within these tiers. The levels are divided into sequenced Units of related competency objectives, which, in turn, are subdivided into progressions of Lessons addressing very specific skills which can be mastered in a single learning period. (Summary Table 1)

To diagnose learner needs and to track competency attainment, the system includes 750 CCP Mastery Tests. Initial Locator Tests indicate whether beginning skills are basic, intermediate or advanced. Subject Strand and Tier Mastery Tests assess global competency. More focused Level Mastery Tests measure the skills covered by subsumed units, while short Unit Mastery Tests assess competency on the several very specific lesson objectives within each unit. The CCP Mastery Tests have parallel forms so they can be applied before and after instruction to measure gains. The test items are sectioned to address subsumed objectives sequentially, so that easily-calculated section subscores can diagnose the specific problems when total scores are inadequate. Using these CCP Mastery Tests, each learner can be simply and quickly assigned to instruction of appropriate difficulty in just those subject areas which have not been mastered. Each learner's progress through the hierarchy of competencies is documented by the associated results, while the aggregates for all learners document the output of the

instructional program and staff, thus providing consistent accountability.

For every "bite-sized" learning objective, CCP Lesson Assignments reference an array of print, audiovisual and computer-based learning materials identified through an exhaustive review of commercial and public sector courseware. The user has flexibility to incorporate any other preferred materials. Hundreds of individual and group exercises, as well as experience-based learning activities, are included with the system and referenced in the assignments as CCP Supplementary Activities. All materials and activities are referenced by alphanumeric identifiers so they can be easily located by learners who have only the most rudimentary skills. Each CCP Lesson Assignment specifies the pages, frames, tracks or sections of the material or activity which relate to the particular lesson objective. Most of the referenced segments contain their own mastery checks.

The CCP Information System gathers all the information needed for individual education planning and tracking, management of instructional activities and evaluation using just two, easy-to-maintain forms. It not only minimizes the paperwork and time required for planning, delivering and assessing individualized instruction, but integrates evaluation and management in day-to-day education delivery.

The five CCP Computer Systems for the Apple IIe automate test-scoring, lesson assignments, recordkeeping and reporting, analysis, management and even computer networking. These enormously powerful and flexible tools for teachers, managers and evaluators are so user-friendly they can be operated by individuals with no computer expertise.

Assistance is provided with the CCP to assure its successful implementation. Detailed CCP Reference Manuals and more

easily digestible CCP User Guides compile all the explanation, background and instructions needed by users. The CCP User Competency Component, structured just like the academic and functional components of the CCP, provides an individualized and self-paced staff training program supplemented by videotapes and "hands-on" activities. Practitioners are prepared and certified as CCP Technical Assistance Agents to help other users with their problems. During the careful planning process required before approval of the CCP Use Agreement which authorizes use of the system, the Remediation and Training Institute provides managment and planning consultant services at no cost. With this help, it is possible for organizations with little or no basic skills instructional experience to implement and operate effective programs.

Continuing support and services are provided to assure effective use and continuing improvement. The CCP Users Network links practitioners through quarterly CCP User Bulletins, Surveys and Updates. A range of cost- and time-saving CCP User Services are provided by the Remediation and Training Institute, such as volume-purchase discounts on equipment and courseware. CCP Quarterly and Annual Use Reports and Reviews help to identify and correct problems. The comprehensive data which are collected quarterly from each user are analyzed by the Remediation and Training Institute to assess CCP and user effectiveness. The results are applied to refine the CCP in annual editions as well as to improve user performance from year to year.

Effective And Efficient Basic Skills Instruction

The CCP Learning Centers established with this system have been aptly characterized as the "high-tech equivalents of traditional one-room schoolhouses." While varying in size, inventory and institutional setting, they are all equipped with a variety of print and audiovisual materials spanning an array of subjects and ability levels, usually

supplemented by a mix of computer-assisted instructional courseware. The CCP Mastery Tests and Information System provide the means for determining where a learner should start, how fast he or she should progress, and when problems are encountered. The CCP Lesson Assignments provide menus for each prescribed learning objective, guiding the instructor and the learner to appropriate materials, including computer-assisted instruction disks, referenced and easily accessed by their identifiers. The CCP Computer Systems score tests instantaneously, record and analyze test results and participant records, permit customization and individualization of lesson assignments, provide spreadsheet and data-base management simplifying everyday learning center tasks, and even facilitate reporting and communication by computer modem.

The assignments, tests and computer systems are so simple that learners can maintain their own records, find their assignments, take and then score their own tests with only occasional help. Freed from lesson planning, and with automation of time-consuming activities such as test preparation and checking, recordkeeping and reporting, teachers can concentrate on one-on-one instruction whenever learners encounter problems in their individual work. With automated and simple procedures for diagnosis and prescription, with a diversity of materials addressing a comprehensive range of learning objectives, and with systems simplified so that learners are self-directed, a single teacher can work with a diverse group of learners, all pursuing different subjects at different levels as dictated by their individual needs.

Thus, a well-organized and managed CCP Learning Center delivers all the ingredients of effective education identified by education research:

* Individualized Instruction. Each learner can work on just what he or she needs at whatever pace is most comfortable.

* Competency-Based Education. Instruction can be flexibly scheduled to accommodate individual situations, with completion as rapidly as mastery is achieved.

* Instructional Options. There are different materials and media easily accessible to address a comprehensive array of instructional objectives so each learner's needs and learning style can be accommodated.

* Self-Directed Learning. Learners are given responsibility, choice and a substantial degree of control, enhancing their feeling of efficacy and their commitment.

* Positive Reinforcement. The organization of instruction into easily-mastered steps, and the frequent mastery tests documenting progress, provide recognition and reinforcement for learning achievements.

* Accountability. There is frequent feedback on the status of each learner so problems can be identified and addressed, with accountability for learning efforts and outcomes.

* Maximum Time-On-Task. Applied learning time or "time-on-task" is maximized since each learner works individually on appropriate materials, with little time lost to group disruptions or explanations.

* One-On-One Attention. Teachers and aides have the time and tools to provide one-on-one attention and assistance when needed.

* Supportive Environment. With individualized instruction, attention and accountability, a participant's learning or outside problems can be addressed without disrupting other learners, so a structured yet supportive learning environment can be maintained.

* Work And Training Linkages. With flexible scheduling of instruction and the competency-based approach, learning can be more easily linked with work, training and education

activities, so that learning is encouraged as a means to other ends.

As a result of incorporating all these success ingredients identified by education research, CCP Learning Centers have the potential to produce learning outputs far exceeding those of instructional alternatives not sharing these features. But this is only one side of the equation: CCP is designed and administered to improve implementation success and operational efficiency as much as educational effectiveness. Because instruction can be delivered to a diversity of learners simultaneously, class-size ability and subject groupings are unnecessary. This makes it easier to maintain full utilization of equipment, materials and staff. The CCP dramatically increases the productivity of instructional staff by simplifying tasks, by minimizing the need for lesson planning, test preparation and materials screening, by automating test-scoring, reporting and analysis, and by facilitating use of aides for many functions usually handled by teachers. As a result, a well-run and fully utilized CCP Learning Center can deliver quality instruction for as little as $2.50-3.00 per instructional hour including all operating costs plus amortization of equipment and courseware investments.

Multi-Purpose Applications

CCP Learning Centers are extremely flexible as well as efficient. They can provide core instruction or serve as adjuncts to other education and training components. Instruction may be offered on a "drop-in" basis, scheduled a few hours a week, or assigned as a full-time activity. Participation can last from a few weeks to many months; it can even be sequenced over a multi-year period. Because the CCP is completely modular, any combination of its Components, Tiers, Subject Strands, Levels or Units can be implemented in a CCP Learning Center and assigned to a CCP

Learner. The system can operate with no advanced educational technologies, but makes it easy to use almost any intensity or mix of computers and audiovisual equipment.

The potential applications are diverse. CCP Learning Centers can serve dropout youth in combination with work or training and placement assistance; secondary and vocational students in remedial classes, school-to-work transition and summer work/education programs; college-bound youth and college students in college prep and in-college developmental education programs; young adults in military preparation activities; dislocated workers in public and private sector programs; adults and senior citizens in continuing education, adult basic education, and employment programs; offenders in correctional institutions and community treatment facilities; the handicapped in community-based and in-school remedial instruction programs; and even youngsters in pre-school activities.

CCP use can be initiated and supported under the Job Training Partnership Act, vocational rehabilitation, vocational education and union or employer job training. It can be part of state and local workfare and welfare efforts or Work Incentive and Head Start programs. It can be supported by adult basic education, public and private secondary and post-secondary school budgets and special federal and state education programs. CCP learning can be financed with corrections and mental health resources available for community or institutional treatment. Economic development, housing and recreation programs provide other funding options. Instruction can also be supported by foundations, corporations and individual sponsors, or delivered on a fee-for-service basis paid by learners or parents.

In summary, the CCP is a multi-purpose tool which can be used in almost any setting, for almost any learning population. A single CCP Learning Center can serve a

variety of learning purposes and populations concurrently, receiving funding from a multiplicity of sources. It can deliver basic skills instruction which combines all the ingredients determined critical for successful education, and yet operate with business-like efficiency. It can harness state-of-the-art technologies to improve management and instructional effectiveness, but also provides the resources and tools for individual attention and support.

Expanding Use

Since the prototype CCP Learning Center was implemented at the beginning of 1984, there has been dramatic growth in the CCP Users Network. At the end of the second quarter of 1986, there were 158 CCP Learning Centers either operational or being implemented, with an growth rate of 100 new centers annually. (Summary Table 2)

CCP Learning Centers, now in twenty-eight states and the District of Columbia, are targeted where they are needed most. Among those operational throughout the first quarter of 1986, three-fifths were in central cities and almost all the remainder were in rural areas. Three of five centers were situated in poverty neighborhoods suffering from unemployment rates above ten percent. (Summary Table 3)

CCP Learning Centers have significantly expanded our nation's basic skills instructional infrastructure. The typical center can deliver nearly fifty thousand learner hours of instruction in a year if all work tabless and computer work stations are occupied during all open hours. With full utilization, the 158 CCP Learning Centers being implemented or already operational at the end of the second quarter of 1986 could potentially deliver over seven million hours of instruction annually. (Summary Table 4).

Because the implementation of a CCP Learning Center requires several months from approval of CCP use to first enrollment,

with another quarter or more for phase-up to steady-state enrollment levels, the increase in delivered instructional hours necessarily lags the growth of capacity. For instance, only 124 of the 158 organizations with CCP Use Agreements at the end of the second quarter of 1986 had started up operations by the end quarter, while only half of those which were operational had a full year's CCP experience. Full utilization of capacity-- keeping every workstation or desk in use during every open hour-- is an unattainable ideal because of absenteeism, class breaks, scheduling conflicts, contract and grant cycles, as well as the difficulties of securing and maintaining funding. Nevertheless, the instructional outputs of CCP Learning Centers are increasing dramatically, reaching an annualized level of 750,000 CCP instructional hours in the first quarter of 1986, with a cumulative total of 765,000 hours since the first centers opened in 1984. (Summary Table 5)

By the end of the first quarter of 1986, CCP Learning Centers were serving over 5000 learners weekly, and had provided instruction to a cumulative total of 13,700 individuals. (Summary Table 6)

The CCP has leveraged substantial and rapidly growing support for targeted basic skills instruction. The cumulative cash and in-kind investment in CCP Learning Centers operating or being implemented through the first quarter of 1986 was $6.6 million. Annualized operating costs for those already open in the quarter were $8.8 million. Cumulative outlayss on CCP Learning Centers and their operation totalled $15.4 million. (Summary Table 7)

The High-Tech One-Room Schoolhouses

The CCP has proved an effective tool for meeting the needs of diverse institutions. A fourth of the CCP Learning Centers operating in the first quarter of 1986 were located in regular secondary or post-secondary schools. Another

fourth were in alternative schools and adult basic education institutions. A fourth were located in nationally-networked community-based organizations including Opportunities Industrialization Centers, National Urban League and SER Jobs For Progress affiliates and 70001 Ltd. franchisees. A fifth were in local Job Training Partnership Act programs. Others were located in union halls, corrections institutions, recreation facilities and a potpourri of other settings. (Summary Table 8)

CCP Learning Centers have been customized to meet the different needs of these institutions and their learner populations. The centers vary significantly in almost every feature. For instance, the maximum capacity of the centers operating in the first quarter of 1986 ranged from 7 to 125, with one in ten accommodating over 45 learners at any point in time, but with a fifth accommodating 15 or fewer. Center sizes ranged from 120 to 3600 square feet, with a fifth encompassing over 2000 square feet while a fourth had less than 1000 square feet. The average CCP Learning Center occupied 1350 square feet and had a maximum capacity for 31 learners. (Summary Table 9)

These "one-room schoolhouses" may not be large, but they have the potential to deliver a substantial total of instructional if used to capacity year-round. CCP Learning Centers were open an average of 27 hours weekly during the first quarter of 1986, with a fifth open 35 hours or more. If utilized at capacity during all open hours, the typical CCP Learning Center could provide nearly 46,000 hours of instruction to learners annually, with a third of the centers capable of providing 50,000 or more hours of individual learning. (Summary Table 10)

The CCP Learning Centers definitely represent the "high tech" approach to education. Investments for hardware, courseware, furnishings and supplies averaged almost $50,000 in the centers operating in the first quarter of 1986

(including the value of donations and existing inventory transferred to the centers). A third of the centers were established for less than $35,000 while a fifth invested $65,000 or more. Over half of CCP Learning Center investments were for computers and software, with only a fifth for more traditional print and audiovisual instructional materials. (Summary Table 11)

While computer-assisted instruction (CAI) is an option, most users have taken advantage of the potential offered by CCP to effectively integrate CAI and to use a range of hardware and courseware. All but one of the CCP Learning Centers operating in the first quarter of 1986 had computers available for instruction (in addition to the CCP Learning Center Workstation for operating the CCP Computer Systems). Centers averaged 8.3 instructional computer terminals, or one for every four learners at capacity. Almost all CCP Learning Centers were equipped with Apples, but there were many other types of computers as well. Three-fourths of centers used more than one type of hardware for instruction, and a third were equipped with three or more different types of computers. The centers were also equipped with a variety of audiovisual equipment, with most having tape recorders, plus 16MM and sound/filmstrip projectors. (Summary Table 12)

CCP Learning Centers are staffed to provide "high touch" along with "high tech." Centers operating in the first quarter of 1986 averaged 3.2 full-time equivalent staff, including a mean of 1.7 instructors and .8 aides or assistants, although a third of the centers operated with two or fewer full-time equivalent staff. (Summary Table 13)

These CCP Learning Center staff are modestly paid. The annual full-time equivalent salary and benefits of all instructors in the first quarter of 1986 averaged only $22,000, or three-fourths of the mean for public school teachers in 1985. Aides averaged $13,000 in annualized salary and benefits, while managers earned $31,000. Where

public school teachers must spend several hours outside the classroom, as well as a large proportion of classroom time, preparing and checking tests, reviewing materials or completing grades and paperwork, four-fifths of all CCP staff hours are spent in the CCP Learning Center, and three-fifths of their time is spent instructing, counseling and directing learners. (Summary Table 14)

With instructors and aides present in the CCP Learning Centers over ninety percent of their working hours, the student/teacher ratios are quite low. For centers operating in the first quarter of 1986, the learner/instructor ratio would have been 20-to-1 if centers were filled to maximum capacity during all open hours, while the ratio of learners to instructors plus aides would have been 11-to-1. But with utilization below capacity, the actual ratio of CCP instructional hours to instructor learning center work hours was less than 4-to-1, so that one-on-one attention could be provided. (Summary Table 15)

Combining "high tech" with "high touch" does not come cheap. The annual operating costs of CCP Learning Centers open in the first quarter of 1986 averaged $82,800 excluding amortization of investments, with staff salaries and fringes accounting for three-fourths of the total. Including two-year amortization of CCP Learning Center investments at a 10% interest rate, total annual costs averaged $111,400. (Summary Table 16)

CCP Learning Centers are able to compete successfully for funding. Centers operating in the first quarter of 1986 received an annualized average of $122,000 in cash grants or contracts plus in-kind contributions, more than covering operating costs and rapid amortization of investments. Support came from a variety of public and private sources, with the Job Training Partnership Act accounting for three-fifths of the total. (Summary Table 17)

Learners And Learning Activities

Since the individualized, self-paced approach of the CCP facilitates service to a range of learners, and since the substantial courseware and computer investment can only be justified if instructional equipment and materials are adequately utilized, CCP Learning Centers are encouraged to maximize capacity utilization by diversifying target groups and funding sources. Over half of centers operating in the first quarter of 1986 had two or more distinct "use activities." Most had activities concentrating on intermediate academic competencies, but four-fifths had at least one activity whose participants concentrated on basic academic competencies, while over half had at least one college prep-oriented use activity. Three-fourths of CCP Learning Centers had one or more use activities concentrating on functional competencies, with occupational knowledge being the primary focus. (Summary Table 18)

In these varied use activities, CCP Learning Centers delivered an annualized average of 8400 CCP instructional hours in the first quarter of 1986. This is the time learners actually spent in the centers working on instructional materials and tests, or typically 85-90% of each attended hour in the CCP Learning Center. Half of the operating centers were in their first year of CCP use, and still phasing up enrollments; the second- or third-year users delivered half again as many hours of instruction. (Summary Table 19)

These CCP learning opportunities have been targeted to individuals with limited employment and education, very much in need of improved basic skills:

-- Three-fourths of CCP learners have come from poor families, three-fifths dependent on some form of welfare.

-- Two-thirds have been without a paycheck for a year or more: and half were totally outside the mainstream, with no work, school or training in the three months prior to entry.

-- One of three entrants was a migrant, a displaced homemaker, an offender or suffered from limited English proficiency or a handicap, while a fourth were single parents.

-- Half of learners were previous high school dropouts, and entrants averaged sixth-grade equivalent reading and math skills. (Summary Table 20)

CCP is generally used as a "quick fix" to help such individuals meet entry requirements for vocational training or work, to prepare them for the GED or college boards, to check the erosion of skills during the summer school vacations, or as a remedial supplement to other instruction. Hence, the duration of CCP participation has averaged only 11.8 weeks for terminees through the first quarter of 1986. During this enrollment, participants received a mean of 45 hours of CCP instruction, with only a third getting or needing more than 50 instructional hours. This CCP instruction is usually integrated with other activities. Seven of eight participants received vocational training, other education, work experience, counseling or other services, averaging twice as many hours in these activities as in CCP instruction. (Summary Table 21)

Reflecting the competency levels and needs of learners, the primary emphasis of instruction has been on intermediate competencies-- those at the fifth- through eighth-grade skill levels. Three-fifths of learners were assigned to the Intermediate Mathematics Subject Strand, and two-fifths to Specific Language Skills and to Developmental Reading. Nearly half of learners were assigned to one or more of the functional subjects, usually one of the Occupational

Knowledge Subject Strands addressing job-getting and -holding competencies. (Summary Table 22)

Better Basic Skills

Learners completed an average of 2.8 CCP Levels, 2.0 in academic subjects and .8 in functional subjects. Nearly three-fourths of the completed levels were in academic subjects, with intermediate academics accounting for more than half of the total. Three-fifths of the completed functional levels were in one of the three Occupational Knowledge Subject Strands. (Summary Table 23)

Learners progressed not only relative to CCP competency measures, but also relative to external standards. Nearly a fourth of CCP terminees acquired a high school diploma or earned academic credit through CCP participation. One in ten acquired a GED prior to termination-- a quite significant proportion considering that of the 35% of CCP terminees who were droputs at entry, less than two-fifths (representing 13 percent of all terminees) were assigned to GED prep, and recognizing that some learners who prepared for the GED undoubtedly acquired their certificate after leaving CCP. Over half were credited with demonstrating work maturity, and 5% completed vocational training while enrolled in CCP. (Summary Table 24)

According to nationally-normed tests, learners gained substantially and rapidly from their CCP participation. While learning gain rates have fluctuated from quarter to quarter reflecting changes in use activities (particularly, implementation of short-duration summer youth programs in the third quarter) as well as varying rates of start-up of new CCP Learning Centers, terminees gained an average of 1.1 grades in reading in 31 hours or reaing instruction, and 1.6 grades in math in 28 math instructional hours. (Summary Table 25)

The "gain rate per 100 hours of related instruction" is the conventional metric for assessing effectiveness of basic skills instruction, with one grade level gain in each 100 hours of instruction in a subject the commonly-accepted success standard. Dividing total grade gains of CCP terminees by their total hours of related instruction (which yields a more conservative measure than the average of individual gain rates) the terminees gained 3.7 grades per 100 hours of reading instruction and 5.1 grades per 100 hours of math instruction. (Summary Table 26)

These extraordinarily high gain rates reflect the surge effect as forgotten skills are relearned. They also result because learners are striving to quickly meet entry standards for vocational training or jobs. Slower learners must remain longer to meet standards. Thus, terminees with less than 50 hours of reading advanced 1.2 grades, with a gain rate of 6.2 grades/100 hours of instruction; while those with over 100 hours of reading advanced a mean of 2.2 grades, or "just" 1.5 grades/100 hours of reading instruction. Likewise, the math gain rate for terminees with less than 50 hours of math instruction was 7.3 grades/100 instructional hours, compared to 1.3 for terminees with over 100 hours math instruction. The critical fact is that long-term participants continue to progress faster than the standard of one grade/100 hours. (Summary Table 27)

Substantial gains and gain rates were realized by even the most disadvantaged learners. Solo parents, welfare recipients, entrants reading below the seventh grade level, dropouts and minorities all achieved gains and gain rates in reading which were at least 90 percent of the average for all participants. The math gain rates of low readers and blacks were a fourth below the CCP average progress in math but still more than three times the success standard. (Summary Table 28)

Equally significant, almost all CCP Users have achieved laudable gains and gain rates despite differences in their target groups, institutional settings, use activities and learning center characteristics. In the fourth quarter of 1985, three of four CCP Learning Centers averaged more than one grade level improvement in reading and seven of ten averaged a grade or more improvement in math. Nine of ten centers averaged reading gains of more than a grade per 100 hours of related instruction, and all realized math gain rates exceeding this standard. (Summary Table 29)

Finally, this evidence from normed tests is reinforced by the overwhelmingly positive perceptions of learners:

-- Four-fifths of respondants to the 1985 CCP Learner Survey felt they were learning faster in the CCP than in their last regular school; only one-in-twenty felt they were learning slower.

-- Three-fourths liked their CCP Learning Center better than their last regular school and only one in ten liked it less.

-- Nine of ten would recommend their CCP Learning Center to friends or relatives needing instruction.

-- Nine of ten CCP learners felt less pressured and worked better at their own pace.

-- Nine of ten claimed to work harder in the CCP Learning Center because they could progress as rapidly as they mastered needed skills.

-- Nine of ten agreed that a good mix of instructional materials was available which helped their learning.

-- Nine of ten agreed that their time in the CCP Learning Center was concentrated on learning with few interruptions.

-- Nine of ten were positive about mastery tests and the accountability they provided.

-- Nine of ten felt they received more individual attention in the learning center than in their previous education activities. (Summary Table 30)

More Bang For The Basic Skills Buck

These documented learning gains and positive learner perceptions are not altogether surprising, nor are they proof of the relative merits of the CCP approach, since CCP Learning Centers are better equipped and more intensively staffed, hence, more expensive, than many instructional options. The critical question is whether the extra gains justify the extra care and costs to add these desirable elements through CCP. The answer is, unequivocally, yes.

The full CCP cost per instructional hour in the first quarter of 1986 was $13.09. At the risk of unflattering comparisons with other education programs which usually ignore capital costs and in-kind contributions, this CCP unit cost measure appropriately includes an ascribed capital cost of $3.28 per instructional hour to amortize the learning center equipment and courseware over two years assuming a 10% interest cost, as well as the $3.40 imputed value of staff, space, equipment and courseware contributed in-kind to CCP Learning Centers. Using similarly conservative yet realistic definitions, CCP instructional hours are defined as the time learners are in the centers actually doing work, so CCP costs per hour are inflated relative to other basic skills instruction programs calculating costs on the basis of scheduled, rather than attended and applied, hours. Recognizing these differences in accounting conventions, there is no argument that CCP hourly costs exceed those of traditional education. For instance, public school operating costs averaged $3200 per student in 1985, with capital costs adding $400 more. With the typical school schedule consisting of 180 school days of five, 50-minute instructional periods, and an assumed

attendance rate of 80 percent, the cost per hour of attended instruction was $6.00, or less than half the hourly cost of CCP instruction.

Yet the critical issue is not the cost per hour of instruction, but rather the cost per grade gained as a result. In public school, the "normal" student gains 1 grade level in a subject each year (though students like those entering CCP average only .7), or $720 for each subject-specific gain. In CCP, learners advance a grade in 27 hours of reading instruction or in 20 hours of math instruction, translating into a cost per grade gain of $353 for reading and $257 for math, or an average of $305. Thus, CCP instruction costs half as much per grade gained even though it costs twice as much per hour.

No doubt, CCP Learners gained rapidly because they were building on the foundation arduously laid year after year in school. Relearning is unquestionably easier than learning the first time around. As indicated, CCP gain rates decline with longer periods of instruction, and CCP is not intended as a substitute for a sound educational foundation. But even in comparison to remedial programs which also build on previous learning and aim to help individuals catch up or get ahead in as short a period as possible, the same holds true: The cost per grade gain output from CCP is far less even though its cost per instructional hour is greater. Adult basic education usually costs in the $5.00-$7.50 range, excluding facilities often provided in-kind. Basic skills components of job training programs typically cost more, $7.50-$10.00, because they target on the higher risk groups and may include counseling and other services. Studies suggest that adult basic education and job training programs usually achieve between .7 and 1.0 grade gains/100 hours in subject. Assuming low-end costs but high-end gains, these alternative basic skills instruction programs

cost fifty percent more than CCP for a grade improvement in reading, and almost twice as much for a grade gain in math.

Basic skills instruction is a profitable social investment, but particularly so with the CCP approach. Follow-up studies of a national sample of young Americans have found that all else being equal, a grade-equivalent increment in tested reading and math skills is associated with 4% higher earnings after school leaving. A grade-gain of reading and of math requiring 47 hours of CCP instruction costs $600. For a typical out-of-school young adult, the five-year earnings increment associated with these improved skills would be $1500, or two and a half times the cost. This does not include the payoff of the educational credential which is more likely to be achieved if skills are enhanced early, nor the value of reduced childbearing and crime which are highly correlated with better basic skills.

Moreover, the cost-effectiveness of CCP can and will increase. It is important to remember that 1985 was the first use year for half of CCP Learning Centers, and costs were inflated by the start-up expenses and underutilization during phase-up of new centers. The median total hourly cost of CCP instruction for centers operating in the first quarter of 1986 was $13.89, but a third of centers had costs below $9.00 per instructional hour, and the median cost would have been only $2.47 if open hours capacity had been fully utilized. CCP Learning Centers in their first year of CCP use had total costs a tenth above those of longer-term users. (Summary Table 31)

Utilization increases with operating experience. CCP instructional hours in the first quarter of 1986 represented less than a fourth of aggregate open hours capacity of CCP Learning Centers. Those in their first year of CCP use had open hours capacity utilization rates two-fifths less than those with two or more years operating experience. (Summary Table 32)

While 100% use is not possible because of scheduling and transition factors, absenteeism and funding fluctuations, ten CCP Learning Centers achieved open hours capacity utilization rates of 50% or more. When all CCP Learning Center achieve 50 percent or better utilization, hourly instructional costs will be cut by more than half. Other economies are possible, with the fourth of centers having full utilization hourly costs below $2.00 per hour offering lessons for the fourth with full utilization costs above $5.00 per hour.

Greater efficiency and economy do not detract from educational effectiveness. On the contrary, the ten CCP Learning Centers with the highest capacity utilization rates in the first quarter of 1986 achieved academic grade gain rates a fourth above the CCP average, while the ten centers with the lowest hourly instructional costs achieved gains almost a fifth above average. In all CCP Learning Centers, the cost per grade gain averaged $327. In the ten most fully utilized centers it averaged only $136. In the ten most economical centers, the grade gain cost was just $110. (Summary Table 33)

Costs and utilization rates are primary considerations in the CCP use planning and review process. The same factors figure prominently in the quarterly performance indicators ranking all CCP Learning Centers and determining whether the use authorization will be renewed from year to year. With full utilization, users can not only serve more learners, but can also generate net revenues to be used for additional investments, supportive services or other organizational needs. Hence, there is no doubt that average utilization will increase, and hourly instructional costs will decrease, multiplying the absolute and relative payoff of CCP.

In summary, the Comprehensive Competencies Program has proven itself as an effective and efficient tool for addressing our nation's basic skills crisis:

* CCP has been implemented successfully by diverse institutions in varied settings to serve many different learner populations.

* CCP has leveraged and target resources to provide learning opportunities where, and for whom, they are needed most.

* CCP has harnessed, disseminated and cost-effectively applied technologies for instruction and management.

* CCP has achieved consistently positive results, producing learning gains and gain rates far exceeding accepted success standards.

* CCP has effectively reached and served individuals who have failed in or been failed by other education programs.

* CCP has demonstrated that effective education can be delivered in a businesslike way, integrating research findings and careful evaluation.

* CCP has yielded a profitable rate of return on the social investment, with promise of an even greater payoff.

This success provides compelling arguments for expanding similar basic skills instruction activities in classrooms, communities and workplaces throughout the nation. It offers hope that the serious basic skills deficiencies of our work force and citizenry can and will be remedied.

Summary Table 1

COMPREHENSIVE COMPETENCIES PROGRAM ORGANIZATIONAL MATRIX

COMPONENT 1. ACADEMIC COMPETENCIES

TIER 1.1: BASIC ACADEMIC COMPETENCIES

	STRAND 1.1.1: BASIC MATHEMATICS	STRAND 1.1.2: READING FUNDAMENTALS
LEVEL 1	Addition	Reading Readiness
LEVEL 2	Subtraction	Elemental Reading Skills
LEVEL 3	Multiplication	Foundation Reading Skills
LEVEL 4	Division	Takeoff Reading Skills

TIER 1.2. INTERMEDIATE ACADEMIC COMPETENCIES

	STRAND 1.2.1: INTERMEDIATE MATHEMATICS	STRAND 1.2.2: DEVELOPMENTAL READING	STRAND 1.2.3: SPECIFIC LANGUAGE SKILLS	STRAND 1.2.4: INTEGRATED LANGUAGE SKILLS
LEVEL 1	Fractions	Grade 5 Reading	Specific Language Skills - 1	Integrated Language Skills - 1
LEVEL 2	Decimals And Percents	Grade 6 Reading	Specific Language Skills - 2	Integrated Language Skills - 2
LEVEL 3	Measurement	Grade 7 Reading	Specific Language Skills - 3	Integrated Language Skills - 3
LEVEL 4	Personal Math	Grade 8 Reading	Specific Language Skills - 4	Integrated Language Skills - 4

TIER 1.3: ADVANCED ACADEMIC COMPETENCIES

	STRAND 1.3.1: ADVANCED MATHEMATICS	STRAND 1.3.2: READING AND HUMANITIES	STRAND 1.3.3: WRITING	STRAND 1.3.4: SOCIAL STUDIES	STRAND 1.3.5: SCIENCE
LEVEL 1	Primary GED	Primary GED	Primary GED	Primary GED	Primary GED
LEVEL 2	Comprehensive GED	Comprehensive GED	Comprehensive GED	Comprehensive GED	Comprehensive GED
LEVEL 3	Primary College Prep	Primary College Prep	Primary College Prep	Primary College Prep	Primary College Prep
LEVEL 4	Comprehensive College Prep	Comprehensive College Prep	Comprehensive College Prep	Comprehensive College Prep	Comprehensive College Prep

Summary Table 1 (Continued)

COMPONENT 2. FUNCTIONAL COMPETENCIES

TIER 2.1: BASIC FUNCTIONAL COMPETENCIES

	STRAND 2.1.1: BASIC OCCUPATIONAL KNOWLEDGE	STRAND 2.1.2: COPING SKILLS
LEVEL 1	Career Choice	Independent Living
LEVEL 2	Job Search	Money Management
LEVEL 3	Job Getting	Food And Health
LEVEL 4	Job Holding	Government And Community Resources

TIER 2.2: INTERMEDIATE FUNCTIONAL COMPETENCIES

	STRAND 2.2.1: INTERMEDIATE OCCUPATIONAL KNOWLEDGE	STRAND 2.2.2: INTERMEDIATE CONSUMER ECONOMICS	STRAND 2.2.3: LIFE SKILLS
LEVEL 1	Career Choice	Budgeting	Independent Living
LEVEL 2	Job Search	Comparison Shopping	Family And Self
LEVEL 3	Job Getting	Banking, Credit And Insurance	Community Resources
LEVEL 4	Job Holding	Personal Possessions	Government And Law

TIER 2.3: ADVANCED FUNCTIONAL COMPETENCIES

	STRAND 2.3.1: ADVANCED OCCUPATIONAL KNOWLEDGE	STRAND 2.3.2: ADVANCED CONSUMER ECONOMICS	STRAND 2.3.3: GOVERNMENT AND LAW	STRAND 2.3.4: HEALTH	STRAND 2.3.5: COMMUNITY RESOURCES
LEVEL 1	Career Choice	Budgeting And Managing Resources	Government Structure And Functions	Preventive Care And Maintenance	Information Sources
LEVEL 2	Job Search	Comparison Shopping	Citizenship	Medical Care	Transportation
LEVEL 3	Job Getting	Banking, Credit, Taxes And Insurance	Law	Self And Family	Community Services
LEVEL 4	Job Holding	Possessions And Housing	Contracts And Documents	Parenting	Recreation Resources

Summary Table 2

NUMBER OF CCP LEARNING CENTERS

	Implementing/Operational	Operational
1984		
First Quarter	4	4
Second Quarter	7	7
Third Quarter	15	12
Fourth Quarter	46	38
1985		
First Quarter	57	46
Second Quarter	88	58
Third Quarter	107	79
Fourth Quarter	116	97
1986		
First Quarter	126	105
Second Quarter	158	124

Summary Table 3

DISTRIBUTION CCP LEARNING CENTERS

By State For CCP Learning Centers
Being Implemented Or Operating At End Of Second Quarter 1986

California	2	Michigan	9
Colorado	8	Mississippi	1
Connecticut	5	New York	11
District of Columbia	6	Ohio	20
Delaware	5	Oklahoma	1
Florida	1	Oregon	6
Georgia	1	Pennsylvania	1
Hawaii	9	Rhode Island	1
Idaho	1	South Carolina	1
Illinois	28	Texas	12
Indiana	3	Virginia	1
Louisiana	1	Washington	2
Maine	9	West Virginia	1
Maryland	3	Wisconsin	3
Massachusetts	6		

By Characteristics Of Area For
CCP Learning Centers Operating In First Quarter 1986

Type of Area	
Central City SMSA Over 1 Million Population	43%
Suburb SMSA Over 1 Million Population	1
Central City SMSA Under 1 Million Population	25
Surburb SMSA Under 1 Million	1
Rural Area	29
Income Of City/County	
Poor	24%
Middle	75
Affluent	1
Income Of Service Delivery Area	
Poor	62%
Middle	37
Affluent	1
Unemployment Rate Of City/County	
High - 10% Or More	26%
Middle - 6% To 9.9%	66
Low - Less Than 6.0%	8
Unemployment Rate of Service Delivery Area	
High - 10% Or More	63%
Middle - 6% To 9.9%	29
Low - Less Than 6.0%	7

Summary Table 4

ANNUAL INSTRUCTIONAL CAPACITY OF CCP LEARNING CENTERS
Learner Capacity Times Annualized Open Hours
For Implementing And Operating CCP Learning Centers

1984	
First Quarter	184,000
Second Quarter	322,000
Third Quarter	689,000
Fourth Quarter	2,114,000
1985	
First Quarter	2,620,000
Second Quarter	4,044,000
Third Quarter	4,918,000
Fourth Quarter	5,331,000
1986	
First Quarter	5,791,000
Second Quarter	7,262,000

Summary Table 5

REPORTED CCP INSTRUCTIONAL HOURS

	During Quarter	Cumulative
1984		
First Quarter	6,500	6,500
Second Quarter	9,600	16,100
Third Quarter	16,400	32,500
Fourth Quarter	52,000	84,500
1985		
First Quarter	63,000	147,500
Second Quarter	106,300	253,800
Third Quarter	146,900	400,700
Fourth Quarter	178,600	579,300
1986		
First Quarter	186,600	765,900

Summary Table 6

CCP LEARNING CENTER ENROLLMENTS

	Participated During Quarter	Terminated During Quarter	Enrolled End Quarter	Cumulative Enrollment
1984				
First Quarter	310	45	265	310
Second Quarter	549	78	471	594
Third Quarter	941	133	808	1,064
Fourth Quarter	2,186	510	1,676	2,442
1985				
First Quarter	2,794	730	2,064	3,560
Second Quarter	2,957	1,220	1,737	4,453
Third Quarter	4,731	2,021	2,710	7,447
Fourth Quarter	5,240	1,693	3,547	9,977
1986				
First Quarter	7,254	2,211	5,043	13,684

Summary Table 7

CUMULATIVE CCP EXPENDITURES

	Investments	Operations	Total
1984			
First Quarter	$200,000	$78,000	$278,000
Second Quarter	430,000	215,000	645,000
Third Quarter	638,000	449,000	1,087,000
Fourth Quarter	2,300,000	1,190,000	3,490,000
1985			
First Quarter	2,423,000	2,087,000	4,510,000
Second Quarter	3,740,000	3,158,000	6,898,000
Third Quarter	5,380,000	4,735,000	10,115,000
Fourth Quarter	5,880,000	6,748,000	12,628,000
1986			
First Quarter	6,592,000	8,787,000	15,379,000

Summary Table 8

INSTITUTIONAL SETTING OF CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Secondary And Vocational Public Schools	11%
Alternative Schools And Adult Education Centers	25
Post-Secondary Schools	12
Nationally-Networked Community-Based Organizations	25
Local Community-Based Organizations	6
Job Training Partnership Act Agencies/Job Corps	19
Corrections Institutions	1
Private Sector And Unions	2

Summary Table 9

SIZE AND LEARNER CAPACITY OF CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Maximum Learner Capacity	
Mean	30.7
Median	30.0
Distribution	
15 Or Less	19%
16-25	27
26-35	20
36-45	26
Over 45	9
Space (Square Feet)	
Mean	1354
Median	1280
Distribution	
500 Or Less	15%
501 - 750	10
751 - 1000	16
1001 - 1250	8
1251 - 1500	14
1501 - 2000	19
Over 2000	18
Space (Square Feet) / Learner Capacity	
Mean	45.6
Median	42.9
Distribution	
25 Or Less	14%
25.1 - 35.0	15
35.1 - 45.0	28
45.1 - 55.0	22
Over 55.0	21

Summary Table 10

INSTRUCTIONAL CAPACITY OF CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

	Quarter Total/13
Weekly Open Hours	
Mean	27.3
Median	26.2
Distribution	
Less Than 10	4%
10 < 15	2
15 < 20	16
20 < 25	22
25 < 30	22
30 < 35	13
35 < 40	13
40 Or More	7

	Open Hours Times Maximum Capacity
Annual Open Hours Capacity	
Mean	45,960
Median	37,152
Distribution	
Less Than 20,000	18%
20,000 - 30,000	15
30,000 - 40,000	24
40,000 - 50,000	14
50,000 - 60,000	13
60,000 - 100,000	11
Over 100,000	6

Summary Table 11

CCP LEARNING CENTER INVESTMENTS
CCP Learning Centers Operating In First Quarter 1986

Total Investment (Including Value Of In-Kind)	
Mean	$49,600
Median	45,700
Distribution	
Less Than $25,000	15%
$25,000 - 34,999	19
$35,000 - 44,999	14
$45,000 - 54,999	15
$55,000 - 64,999	19
$65,000 - 74,999	11
$75,000 And Over	7
Percent In-Kind	32%

Type Of Investment	Mean	Median
Computers/Peripherals	$20,600	$15,500
Audiovisual Equipment	1,800	1,300
Print/Audiovisual Materials	10,600	11,300
Instructional Software	5,700	4,600
Supplies/Reproduction	2,800	2,300
Furnishings	4,300	3,200
Center Restoration	3,600	800

Summary Table 12

INSTRUCTIONAL EQUIPMENT IN CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Terminals Of All Types	
Mean	8.3
Median	7.0
Distribution	
Less than 2	2%
3-4	14
5-6	26
7-8	24
9-10	8
11-12	7
13-14	7
15 Or More	12
Learners/Terminal When Learning Center Full	
Mean	4.4
Median	3.3
Distribution	
Less Than 2	10%
2.0 - 2.9	21
3.0 - 3.9	28
4.0 - 4.9	6
5.0 - 5.9	14
6.0 - 6.9	5
7.0 And Over	15
Types of Computers	
1 Type Only	27%
2 Types	39
3 Types	30
4 Or More Types	5

	Mean Number	Percent With
Apples	4.7	94%
TI/PLATO Micro	1.7	39
Sony/CCC Micro	.8	45
CDC/PLATO Micro	.3	7
PLATO Or CCC Network	.3	8
Other	.4	13

Types Of Audiovisual Equipment

	Mean Number	Percent With
Audio Tape Recorder	1.8	72%
16MM Cartidge Projector	1.0	66
Sound/Filmstrip Projector	1.0	64
Filmstrip Projector	.8	49
VHS/BETA Recorder	.2	15

Summary Table 13

STAFFING OF CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

	Number	Full-Time Equivalents
Instructors/Counselors		
Mean	2.8	1.7
Median	2.0	1.3
Distribution		
0	0%	0%
.1 - 1.0	26	40
1.1 - 2.0	33	33
2.1 - 3.0	16	18
3.1 - 4.0	11	5
4.1 - 5.0	6	4
5.0 Or Greater	8	1
Aides/Assistants		
Mean	1.4	.8
Median	1.0	.7
Distribution		
0	21%	21%
.1 - 1.0	51	59
1.1 - 2.0	15	15
2.1 - 3.0	6	4
3.1 - 4.0	0	1
4.1 - 5.0	4	0
5.0 Or Greater	4	0
Managers/Planners		
Mean	1.3	.5
Median	1.0	.3
Distribution		
0	7%	7%
.1 - 1.0	66	85
1.1 - 2.0	24	6
2.1 - 3.0	1	2
3.1 - 4.0	2	0
4.1 - 5.0	0	0
5.0 Or Greater	0	0
Clerks/Secretaries		
Mean	.6	.2
Median	1.0	.1
Distribution		
0	47%	47%
.1 - 1.0	51	52
1.1 - 2.0	2	1
2.1 - 3.0	0	0
3.1 - 4.0	0	0
4.1 - 5.0	0	0
5.0 Or Greater	0	0
Total Learning Center Staff		
Mean	6.0	3.2
Median	5.0	2.5
Distribution		
0	0%	0%
.1 - 1.0	1	2
1.1 - 2.0	2	32
2.1 - 3.0	15	31
3.1 - 4.0	20	11
4.1 - 5.0	24	13
5.0 Or Greater	38	11

Summary Table 14

CCP LEARNING CENTER WORK AND COMPENSATION
CCP Learning Centers Operating In First Quarter 1986

Full-Time Equivalent Staff Salaries And Benefits

	Instructors	Aides	Managers
Mean	$21,877	$13,206	$31,291
Median	20,853	12,529	27,000
Distribution			
Less Than $10,000	9%	39%	7%
10,000 - 14,999	13	31	7
15,000 - 19,999	23	15	12
20,000 - 24,999	28	15	21
25,000 - 29,999	14	0	12
30,000 - 34,999	14	0	13
35,000 And Over	9	0	30

Allocation Of CCP Work Hours

	Instructors	Aides	Managers	Total
In Learning Center	93%	92%	38%	80%
With Learner(s)	68%	60%	9%	59%
Doing Paperwork	15	27	15	17
Marketing/Managing	17	13	76	24

Summary Table 15

STUDENT/TEACHER RATIOS IN CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Ratio If Center Full (Capacity x Open Hours/ .9 x Staff Hours)	Learner/ Instructor	Learner/ Instructor + Aide
Mean	19.9	11.2
Median	15.0	9.2
Distribution		
Less Than 5.0	6%	13%
5.0 - 6.9	13	27
7.0 - 8.9	19	17
9.0 - 10.9	13	12
11.0 - 12.9	6	11
13.0 - 14.9	15	4
15.0 - 19.9	15	8
20.0 - 29.9	11	2
30.0 And Over	9	2

Operating Ratio (CCP Instructional Hours/ .9 x Staff Hours)	Instructor	Instructor + Aide
Mean	3.4	2.1
Median	2.1	1.7
Distribution		
Less Than 1.0	14	21
1.0 - 1.9	34	41
2.0 - 2.9	23	20
3.0 - 3.9	12	7
4.0 - 4.9	10	7
5.0 Or Greater	8	4

Summary Table 16

CCP LEARNING CENTER ANNUAL COSTS
CCP Learning Centers Operating In First Quarter 1986

Annualized Operating Costs Excluding Amortization	
Mean	$82,756
Median	64,756
Distribution	
Less than $40,000	21%
40,000 - 80,000	41
80,000 - 120,000	18
120,000 - 160,000	10
Over 160,000	10

By Type	Mean	Median
Staff Salaries and Fringes	$62,540	$44,216
Rent and Utilities	12,528	7,692
Duplication and Supplies	1,860	1,100
Equipment Maintenance	1,580	612
Other	4,248	920
Percent In-Kind	24%	18%

Annualized Total Costs Including Amortization Of Investment Over 2 Years At 10% Interest	
Mean	$110,425
Median	97,968
Distribution	
Less than $40,000	8%
40,000 - 80,000	32
80,000 - 120,000	30
120,000 - 160,000	14
Over 160,000	16

Summary Table 17

CASH AND IN-KIND SUPPORT FOR CCP LEARNING CENTERS
CCP Learning Centers Operating In First Quarter 1986

Annual Total Projected From Quarterly Support Received	
Mean	$121,864
Median	87,032
Distribution	
Less Than $40,000	22%
40,000 - 80,000	28
80,000 - 120,000	15
120,000 - 160,000	11
160,000 - 200,000	8
Over 200,000	16

Source Of Support	Percent Total Support	Percent With
Job Training Partnership Act	58%	81%
Vocational Education	4	11
Secondary Education	10	32
Post-Secondary Education	5	14
Corrections	1	1
Welfare	3	6
Other	20	20

Summary Table 18

CCP LEARNING CENTER USE ACTIVITIES
CCP Learning Centers Operating In First Quarter 1986

Number Use Activities	
Mean	2.2
Median	2.0
Distribution	
1	45%
2	24
3	18
4 Or More	13

Primary Competencies Addressed In Use Activity	Percent Of Use Activities	Percent Centers With
Basic Mathematics	68%	82%
Reading Fundamentals	63	76
Intermediate Mathematics	93	96
Developmental Reading	87	94
Language Skills	82	87
GED Prep	73	82
College Prep	26	56
Basic Occupational Knowledge	40	49
Coping Skills	32	41
Intermediate Occupational Knowledge	47	61
Intermediate Consumer Economics	36	47
Life Skills	35	41
Advanced Occupational Knowledge	47	56
Advanced Consumer Economics	34	42
Government And Law	32	42
Health	32	42
Community Resources	33	42

Primary Target Groups In Use Activity	Percent Of Use Activities	Percent Centers With
Primary Students	13%	20%
Secondary Students	40	54
Dropouts	77	92
Young Hish School Graduates	36	52
Older High School Graduates	41	54
Post-Secondary Students	16	27
Poor	92	94
Limited English	15	20
Handicapped	28	39
Offender	40	51
Solo Parents	50	62
Displaced Workers	19	28

Summary Table 19

ANNUAL CCP INSTRUCTIONAL HOURS
CCP Learning Centers Operating In First Quarter 1986
Annual Hours Projected From Quarter Totals

	All Centers	Second Use Year Centers
Mean	8,432	10,304
Median	6,344	8,924
Distribution		
Less Than 2000	12%	11%
2000 - 3000	9	5
3000 - 4000	8	7
4000 - 5000	7	2
5000 - 6000	11	12
6000 - 7000	12	7
8000 - 10000	16	12
10000 - 20000	16	14
20000 Or More	8	30

Summary Table 20

ENTRY CHARACTERISTICS OF CCP LEARNERS
Cumulative CCP Terminees And First Quarter 1986 Actives

	Terminees To Date	Active In Quarter
Sex		
Male	47%	43%
Female	53	57
Age		
Under 14	1%	1
14-15	6	6
16-17	16	22
18-19	16	17
20-21	11	12
22-44	47	38
45-54	3	3
55+	1	1
Ethnic Group		
White	38%	36
Black	48	45
Hispanic	10	14
American Indian	1	1
Asian	3	3
Education Status At Entry		
Primary Student	3%	3%
High School Student	16	19
Post-Secondary Student	4	3
Dropout	42	54
High School Grad, Out Of School	26	16
GED Grad, Out Of School	8	4
Post-Secondary Grad, Out Of School	2	1
Highest Grade Completed		
6 Or Less	2%	2%
7	2	3
8	7	12
9	15	18
10	20	23
11	17	20
12	30	20
13-15	5	2
16 Or More	1	1
Average	10.5	10.1
Percent Students Behind Year Or More	58%	61%
Entry Reading Grade Level		
Mean	7.9	7.5
Distribution		
Less Than 5.0	11%	12%
5.0 < 7.0	26	29
7.0 < 9.0	30	31
9.0 < 11.0	23	19
11.0 +	10	8
Entry Math Grade Level		
Mean	7.2	6.9
Distribution		
Less Than 5.0	12%	13%
5.0 < 7.0	37	39
7.0 < 9.0	34	34
9.0 < 11.0	11	10
11.0 +	6	4

Summary Table 20
(Continued)

	Terminees To Date	Active In Quarter
Family Status		
Single Parent	22%	24%
Living Alone Or With Friends	27	19
Married, Spouse Present	11	11
Living With Parents Or Relatives	40	45
Any Children	33%	34%
Mean Number Children, Those With	2.0	2.0
Child Care Is Needed	14%	16%
Economic Status		
< 70% BLS Lower Living Standard	76%	72%
70-100% BLS Lower Living Standard	16	17
> 100% BLS Lower Living Standard	8	11
Receiving Assistance		
Any	62%	62%
Food Stamps	43	43
Medicaid	31	32
Cash Welfare	37	36
Unemployment Insurance	5	5
Housing Assistance	8	9
Other Cash	12	12
Mean Weeks Worked Last 3 Months	1.5	1.7
Percent Weeks Worked Last 3 Months		
10 Or More	8%	9
3-9	9	10
1-2	2	3
0	81	79
Percent Weeks In Last 3 Months		
Working, No School Or Training	9%	10%
Working, In School Or Training	5	6
School Or Training, No Work	29	30
No School, Work Or Training	47	55
Mean Earnings All Last 3 Months	$157	$170
Mean Weeks Worked Last Year	6.8	7.7
Percent Weeks Worked Last Year		
40 Or More	6%	7%
9-39	19	20
1-8	10	9
None	65	64
Mean Earnings All Last Year	$829	$894
Percent With Barriers To Employment		
Any	33%	32%
Two Or More	5	4
Limited English-Speaking	3	6
Migrant And Seasonal Farmworker	1	2
Handicapped	6	7
Offender	21	12
Displaced Homemaker	4	6
Lacking Citizenship	2	3

Summary Table 21

HOURS CCP INSTRUCTION AND RELATED ACTIVITIES
All CCP Terminees In And Through First Quarter 1986

	Terminees Through Quarter	Terminees In Quarter
Mean Days of CCP Enrollment	82.4	87.5
CCP Instructional Hours		
Mean	45.0	40.6
Distribution		
Less than 25	49%	54%
25-49	21	21
50-74	12	12
75-99	6	4
100-125	5	3
125+	8	7
Related Activities		
Percent With		
Any	88%	94%
Vocational Training	14	13
Non-CCP Education	32	42
Work Experience	15	11
Counseling	69	77
Other	24	30
Average Hours Terminees With		
Any	86.9	81.9
Vocational Training	146.9	156.6
Non-CCP Education	63.8	63.7
Work Experience	160.2	159.2
Counseling	10.1	9.5
Other	14.6	15.2
Average Hours All Terminees		
Any	76.2	76.9
Vocational Training	20.9	20.6
Non-CCP Education	20.2	26.9
Work Experience	24.2	17.5
Counseling	7.0	7.3
Other	3.6	4.6

Summary Table 22

COMPETENCIES ADDRESSED BY CCP LEARNERS
All CCP Terminees In And Through First Quarter 1986

Percent Assigned To Subject Strand	Terminees Through Quarter	Terminees In Quarter
Any Academic	84%	81%
Any Basic Academic	20	16
Basic Mathematics	17	14
Reading Fundamentals	12	9
Any Intermediate Academic	68	67
Intermediate Mathematics	60	56
Developmental Reading	39	33
Language Skills	38	33
Any Advanced Academic	35	36
Any GED Prep Level	34	35
Advanced Mathematics	17	16
Reading/Humanities	21	19
Writing	19	18
Social Studies	14	14
Science	13	12
Any College Prep Level	7	5
Any Functional	46%	43%
Any Basic Functional	10	7
Occupational Knowledge	8	6
Coping Skills	7	4
Any Intermediate Functional	24	20
Occupational Knowledge	20	16
Consumer Economics	10	7
Life Skills	11	8
Any Advanced Functional	27	24
Occupational Knowledge	20	16
Consumer Economics	9	8
Government And Law	8	6
Health	11	7
Community Resources	9	7

Summary Table 23

COMPETENCY ATTAINMENTS OF CCP LEARNERS
All CCP Terminees In And Through First Quarter 1986

	Terminees Through Quarter	Terminees In Quarter
Mean Levels Completed	2.8	2.5
Percent Of Completed CCP Levels		
Academic	73%	74%
Basic Academic	10	10
Basic Mathematics	6	6
Reading Fundamentals	4	4
Intermediate Academic	52	51
Intermediate Mathematics	26	27
Developmental Reading	13	11
Language Skills	13	13
Advanced Academic	11	12
Advanced Mathematics	3	3
Reading/Humanities	3	3
Writing	3	3
Social Studies	1	1
Science	1	1
GED Prep Levels	10	11
College Prep Levels	1	1
Functional	27%	26%
Basic Functional	3	3
Occupational Knowledge	2	2
Coping Skills	1	1
Intermediate Functional	9	8
Occupational Knowledge	6	5
Consumer Economics	2	1
Life Skills	1	2
Advanced Functional	15	15
Occupational Knowledge	7	8
Consumer Economics	2	2
Government And Law	1	2
Health	3	2
Community Resources	1	1

Summary Table 24

BENCHMARKS ACHIEVED DURING CCP ENROLLMENT BY TERMINEES
All CCP Terminees In And Through First Quarter 1986

Terminees Through First Quarter 1986	
Any Benchmark	62%
Acquired GED	9
Acquired High School Diploma	7
Acquired Academic Credit	15
Demonstrated Work Maturity	51
Completed Training	5
Terminees In First Quarter 1986	
Any Benchmark	59%
Acquired GED	10
Acquired High School Diploma	4
Acquired Academic Credit	18
Demonstrated Work Maturity	46
Completed Training	5

Summary Table 25

CCP LEARNER GAINS ON GRADE-NORMED ACADEMIC TESTS
CCP Terminees Tested In And Through First Quarter 1986

	Grade Gains		Hours Related Instruction	
	Reading	Math	Reading	Math
1984				
Fourth Quarter	1.3	1.7	41.6	31.7
1985				
First Quarter	1.4	1.5	38.8	31.7
Second Quarter	1.2	1.4	52.2	33.7
Third Quarter	.9	1.2	20.8	21.1
Fourth Quarter	1.0	1.6	26.1	26.5
1986				
First Quarter	1.0	1.6	22.9	27.8
All Terminees	1.0	1.6	31.6	27.8
Distribution				
Grade Gains				
0 Or Negative	22%	17%		
> 0 <.5	12	10		
.5 < 1.0	15	15		
1.0 < 1.5	16	15		
1.5 < 2.0	13	11		
2.0 +	23	32		

Summary Table 26

CCP LEARNER GAIN RATES ON GRADE-NORMED ACADEMIC TESTS
Terminees Tested In And Through First Quarter 1986

	Gain Rates/100 Hours (Total Grade Gains/Total Related Hours)	
	Reading	Math
1984		
Fourth Quarter	2.8	4.8
1985		
First Quarter	2.8	4.2
Second Quarter	2.4	3.9
Third Quarter	4.3	5.6
Fourth Quarter	4.0	5.6
1986		
First Quarter	4.0	5.4
All Terminees	3.7	5.1
Distribution		
0 Or Negative	22%	17%
> 0 <.5	3	2
.5 < 1.0	4	3
1.0 < 1.5	5	4
1.5 < 2.0	5	4
2.0 +	61	70

Summary Table 27

LEARNING GAIN PATTERNS BY DURATION OF CCP INSTRUCTION
CCP Terminees Third Quarter 1985 - First Quarter 1986

	Hours of Related Instruction		
	Low (1 < 49)	Medium (50 < 99)	High (100 >)
Reading			
Average Hours Instruction	16.3	70.4	140.9
Grade Gain	1.1	1.5	2.2
Gain Rate/100 Hours	6.0	2.2	1.5
Math			
Average Hours Instruction	17.0	68.5	133.5
Grade Gain	1.3	1.9	1.6
Gain Rate/100 Hours	6.4	2.7	1.2

Summary Table 28

COMPARATIVE GAINS BY CCP LEARNER ENTRY CHARACTERISTICS
CCP Terminees Third Quarter 1985 - First Quarter 1986

	Reading		Math	
	Grade Gain	Gain/100 Hours	Grade Gain	Gain/100 Hours
All	1.20	3.88	1.42	4.51
Single Parents	1.17	4.33	1.54	4.65
Welfare Recipients	1.26	3.68	1.48	4.33
Low Readers	1.42	3.63	1.19	* 3.43
Dropouts	1.21	4.00	1.30	4.02
Under Age 22	1.26	3.68	* 1.23	4.19
Blacks	1.10	3.58	* 1.06	* 3.35
Hispanics	1.68	5.70	1.34	5.19

Summary Table 29

COMPARATIVE GAINS OF CCP LEARNING CENTERS
CCP Learning Centers Operating In Fourth Quarter 1985

	Reading		Math	
	Grade Gain	Gain/100 Hours	Grade Gain	Gain/100 Hours
Mean	1.0	3.8	1.6	5.6
Median	1.1	3.8	1.5	5.3
Distribution				
0 Or Negative	0%	0%	0%	0%
> 0 <.5	4	0	12	0
.5 < 1.0	20	8	18	0
1.0 < 1.5	43	15	14	10
1.5 < 2.0	28	15	38	12
2.0 +	5	62	18	78

Summary Table 30

CCP LEARNER ASSESSMENTS
(1985 CCP Learner Survey Respondants With Opinion)

* Are you learning faster in the learning center than in your last regular school?

Much faster	41%
A little faster	39
About the same	14
A little slower	5
Much slower	1

* Do you like the learning center better than your last regular school?

Much more	53%
Somewhat more	22
About the same	16
Somewhat less	4
Much less	4

* How would you rate your learning center?

Great, I would not change anything.	36%
Good, but I would make a few changes.	44
OK, but could be improved.	16
Not OK. Needs many changes.	3
Very bad. Needs total change.	2

* Would you recommend the learning center to your friends and relatives who need to learn?

I would strongly recommend it	45%
I would suggest they try it out	43
I would not recommend for or against	8
I would warn about some bad points	2
I would strongly advise against it	2

* In the learning center, how long did it take you to learn how to get assignments, keep track of time and to find the right tests?

A day or less	41%
Several days	30
A week	13
Several weeks	2
Still do not know	9

* The learning center allows me to learn more quickly because I don't waste time on learning things that I already know.

Agree strongly	59%	Disagree somewhat	5
Agree somewhat	33	Disagree strongly	2

* I work at my own pace and I do not feel pressured to compete with other learners.

Agree strongly	76%	Disagree somewhat	3
Agree somewhat	20	Disagree strongly	1

* The learning center allows me to take all the time I need to learn my assignments.

Agree strongly	71%	Disagree somewhat	3
Agree somewhat	22	Disagree strongly	3

Summary Table 30 (Continued)

* The learning center focuses on me, my needs and my style of learning.

Agree strongly	59%	Disagree somewhat	8
Agree somewhat	31	Disagree strongly	2

* One reason the learning center is better than the regular school classrooms is that if I miss a day, I can come back and pick up where I left off.

Agree strongly	80%	Disagree somewhat	3
Agree somewhat	14	Disagree strongly	3

* In the learning center I can work more or fewer hours some days and weeks depending on my needs.

Agree strongly	51%	Disagree somewhat	11
Agree somewhat	28	Disagree strongly	10

* The learning center hours and location are convenient, making it easier for me to attend and learn.

Agree strongly	53%	Disagree somewhat	10
Agree somewhat	33	Disagree strongly	4

* I work hard in the learning center because I can move on and out as soon as I learn what I need.

Agree strongly	65%	Disagree somewhat	4
Agree somewhat	27	Disagree strongly	3

* I think that the learning center uses a good variety of materials and they are easy to understand.

Agree strongly	48%	Disagree somewhat	9
Agree somewhat	35	Disagree strongly	3

* I like computer-assisted instruction more than learning from books alone.

Agree strongly	42%	Disagree somewhat	16
Agree somewhat	35	Disagree strongly	6

* The books and materials in the learning center are more closely related to what I need to meet my life goals than the books and materials in regular school.

Agree strongly	41%	Disagree somewhat	13
Agree somewhat	41	Disagree strongly	5

* The many tests help me to know what I have learned and where I need more work.

Agree strongly	76%	Disagree somewhat	3
Agree somewhat	19	Disagree strongly	1

* I like to take tests, even if I do not pass the first time, because it is the best way to know whether I have learned a skill.

Agree strongly	61%	Disagree somewhat	6
Agree somewhat	27	Disagree strongly	6

* When I have a problem with an assignment in the learning center, it takes a long time before the instructor or other staff give me help.

Agree strongly	9%	Disagree somewhat	18
Agree somewhat	14	Disagree strongly	57

Summary Table 30
(Continued)

* Staff and learners in the center usually know what they are supposed to be doing.

Agree strongly	60%	Disagree somewhat	6
Agree somewhat	30	Disagree strongly	3

* I keep track of my own time and assignments and I always know what I should be doing.

Agree strongly	53%	Disagree somewhat	6
Agree somewhat	38	Disagree strongly	2

* I always know where to find my assignments and learning materials in the learning center.

Agree strongly	48%	Disagree somewhat	11
Agree somewhat	37	Disagree strongly	2

* I like the tests used in the learning center because they let me know what I have learned and when I need more work.

Agree strongly	76%	Disagree somewhat	3
Agree somewhat	19	Disagree strongly	1

* In the learning center, I can learn most skills using the books and computers on my own without much help from teachers.

Agree strongly	38%	Disagree somewhat	8
Agree somewhat	42	Disagree strongly	13

* My time at the learning center is spent with few interruptions.

Agree strongly	46%	Disagree somewhat	9
Agree somewhat	38	Disagree strongly	8

* Too much time is wasted at the learning center on getting assignments, scoring tests and keeping records.

Agree strongly	5%	Disagree somewhat	25
Agree somewhat	17	Disagree strongly	53

* Most learners cause fewer problems and waste less time in the learning center than in regular school.

Agree strongly	48%	Disagree somewhat	10
Agree somewhat	30	Disagree strongly	7

* The staff at the learning center are always there to help me when I run into a problem with assignments.

Agree strongly	67%	Disagree somewhat	6
Agree somewhat	24	Disagree strongly	6

* In comparison to other teachers that I have had, the learning center staff seem to care more about my learning goals.

Agree strongly	67%	Disagree somewhat	3
Agree somewhat	26	Disagree strongly	4

* The learning center staff care what I feel and think.

Agree strongly	55%	Disagree somewhat	5
Agree somewhat	35	Disagree strongly	3

* I believe that the learning center staff understand me and try to adjust to my interests and needs.

Agree strongly	53%	Disagree somewhat	8
Agree somewhat	37	Disagree strongly	2

Summary Table 30
(Continued)

* The learning center staff believe that I can learn and treat me with respect.

Agree strongly	74%	Disagree somewhat	2
Agree somewhat	24	Disagree strongly	1

* I like the way tests are scored in the learning center because it is always fair.

Agree strongly	64%	Disagree somewhat	6
Agree somewhat	26	Disagree strongly	4

* I do not feel "put down" by people at the learning center because of what I don't know or because I learn more slowly than others.

Agree strongly	74%	Disagree somewhat	4
Agree somewhat	20	Disagree strongly	2

* In the learning center, I know I can learn things that were really hard in the past.

Agree strongly	60%	Disagree somewhat	5
Agree somewhat	33	Disagree strongly	2

* The learning center makes me feel like learning.

Agree strongly	67%	Disagree somewhat	5
Agree somewhat	24	Disagree strongly	4

* The staff of the learning center treat everyone with respect and are treated with respect by learners.

Agree strongly	67%	Disagree somewhat	6
Agree somewhat	26	Disagree strongly	1

* Most other participants want to learn, and the learning center is set up so they can.

Agree strongly	61%	Disagree somewhat	12
Agree somewhat	22	Disagree strongly	6

* The learning center teaches skills that will be needed in the world of work.

Agree strongly	37%	Disagree somewhat	16
Agree somewhat	40	Disagree strongly	7

* I am better able to do things at home and in the community because of what I am learning.

Agree strongly	63%	Disagree somewhat	6
Agree somewhat	29	Disagree strongly	2

* What I learn in the learning center will make a difference in my future.

Agree strongly	67%	Disagree somewhat	5
Agree somewhat	26	Disagree strongly	3

* I work harder in the learning center because learning is linked to work, training or other activities.

Agree strongly	63%	Disagree somewhat	6
Agree somewhat	30	Disagree strongly	3

Summary Table 31

CCP COSTS PER INSTRUCTIONAL HOUR
CCP Learning Centers Operating In First Quarter 1986

	All Users	First-Year Users	Longer-Term Users
Operating Costs/CCP Instructional Hours			
All Costs/All Hours	$9.81	$10.28	$9.20
Mean Of Centers	15.90	16.67	14.91
Median Of Centers	10.43	11.78	10.19
Distribution Of Centers			
Less Than $2.00	0%	0%	0%
$2.00 - 3.00	8	0	14
$3.00 - 5.00	11	5	14
$5.00 - 7.00	12	7	14
$7.00 - 9.00	15	21	7
$9.00 - 11.00	8	7	10
$11.00 - 13.00	10	12	7
$13.00 - 15.00	11	10	12
$15.00 - 25.00	13	14	12
$25.00 And Over	17	24	10
Total Costs/CCP Instructional Hours			
All Costs/All Hours	$13.09	$13.53	$12.46
Mean Of Centers	22.27	23.01	21.21
Median Of Centers	13.89	15.15	13.68
Distribution Of Centers			
Less Than $2.00	0%	0%	0%
$2.00 - 3.00	0	0	0
$3.00 - 5.00	4	0	7
$5.00 - 7.00	10	5	14
$7.00 - 9.00	12	9	14
$9.00 - 11.00	10	9	10
$11.00 - 13.00	8	12	5
$13.00 - 15.00	8	9	7
$15.00 - 25.00	25	26	24
$25.00 And Over	23	30	19
Operating Costs/Open Hours Capacity Instructional Hours			
All Costs/All Hours	$1.85	$1.73	$1.97
Mean Of Centers	2.39	2.24	2.54
Median Of Centers	1.91	1.91	1.93
Distribution Of Centers			
Less Than $2.00	57%	57%	57%
$2.00 - 3.00	19	17	21
$3.00 - 5.00	16	14	19
$5.00 - 7.00	4	7	2
$7.00 - 9.00	0	0	0
$9.00 - 11.00	4	5	2
$11.00 - 13.00	0	0	0
$13.00 - 15.00	0	0	0
$15.00 - 25.00	0	0	0
$25.00 And Over	0	0	0
Total Costs/Open Hours Capacity Instructional Hours			
All Costs/All Hours	$ 2.37	$2.22	$2.59
Mean Of Centers	3.23	3.03	3.53
Median Of Centers	2.47	2.45	2.85
Distribution Of Centers			
Less Than $2.00	38%	33%	31%
$2.00 - 3.00	32	30	33
$3.00 - 5.00	24	28	14
$5.00 - 7.00	7	4	10
$7.00 - 9.00	4	2	5
$9.00 - 11.00	4	2	5
$11.00 - 13.00	1	0	2
$13.00 - 15.00	0	0	0
$15.00 - 25.00	0	0	0
$25.00 And Over	0	0	0

Summary Table 32

CCP LEARNING CENTER INSTRUCTIONAL HOURS VS. CAPACITY
CCP Learning Centers Operating In First Quarter 1986

	All Users	First-Year Users	Longer-Term Users
CCP Instructional Hours/ Open Hours Capacity			
Mean	22%	17%	28%
Median	17	17	22
Distribution			
Less Than 5%	11%	7%	14%
5 - 10%	13	14	12
10 - 15%	18	10	26
15 - 20%	20	14	23
20 - 30%	15	17	14
30 - 40%	11	17	5
40% Or More	13	21	6
CCP Instructional Hours/ Full-Time Use Capacity			
Mean	14%	18%	11%
Median	11	14	11
Distribution			
Less Than 5%	14%	7%	16%
5 - 10%	25	19	30
10 - 15%	29	16	42
15 - 20%	14	21	7
20 - 30%	9	17	2
30 - 40%	4	2	4
40% Or More	5	10	0

Summary Table 33

CCP LEARNING CENTER EFFICIENCY AND EFFECTIVENESS

	Ten Highest Use Rate Centers	Ten Lowest Cost Centers	All Centers
All Costs/All CCP Instructional Hours	$6.96	$5.16	$13.09
Mean Annualized CCP Instructional Hours	19,468	18,592	8,432
Mean Reading Gain/ 100 Hours	4.7	4.6	3.7
Mean Math Gain/ 100 Hours	5.4	4.8	4.0
Average Reading And Math Gain/100 Hours	5.1	4.7	4.0
Estimated Mean Annual Grade Gains	993	874	337
Mean Cost/Grade Gained	$136	$110	$327